

Memorandum

11300

MAIN

DATE: 6 May 87

FROM: Director, Utilities Branch

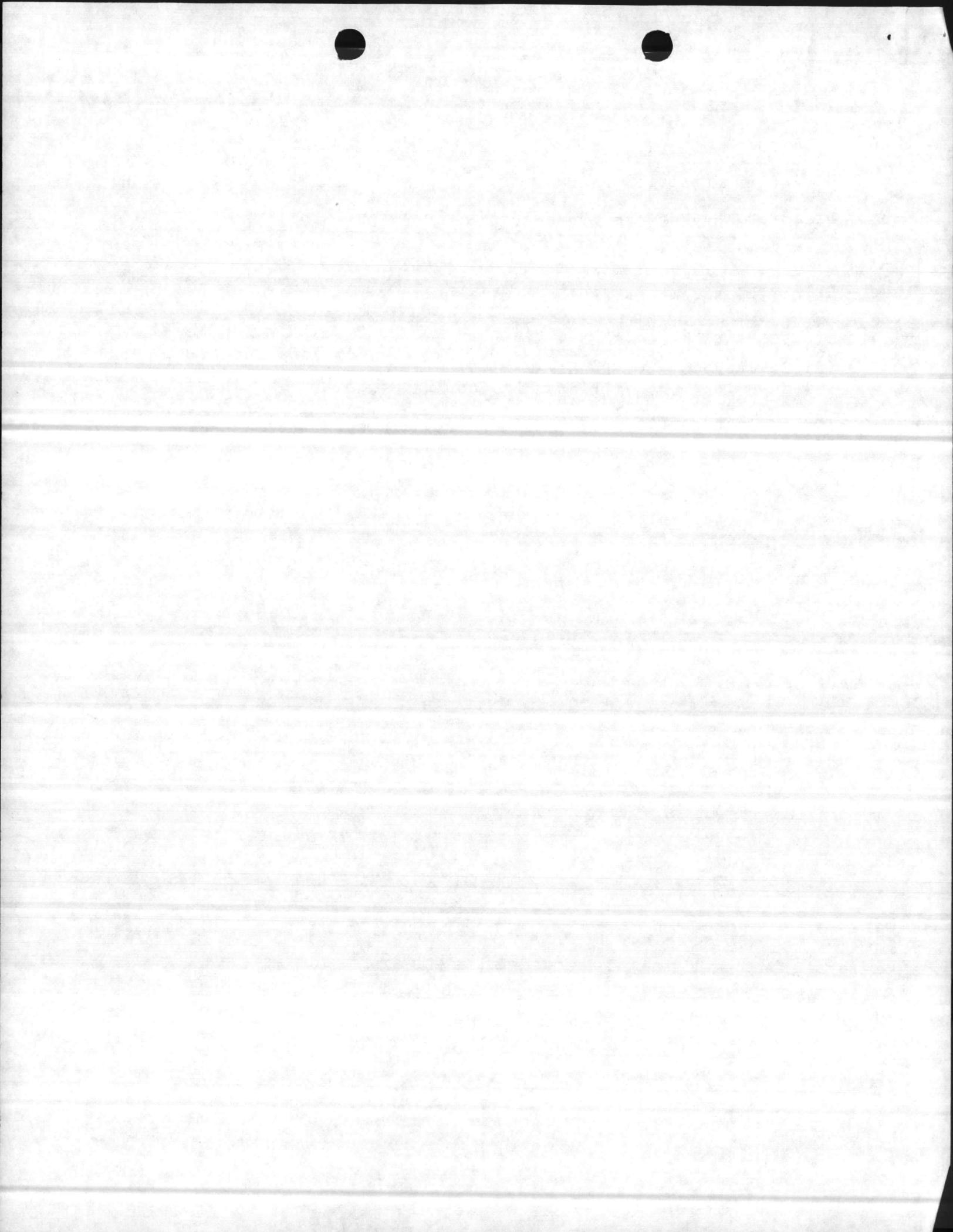
TO: Director, Operations Branch (Attn: Greg Shoemaker)

SUBJ: UTILITIES REPAIR PROJECTS

Encl: (1) Repairs to Utilities Buildings
(2) Repairs to Steam Plants 1700, AS-3502, AS-710, and AS-705
(3) Sewerage System Repairs
(4) Repairs to Steam Plants BA-106 and M-230

1. Enclosures (1), (2), (3), and (4) are submitted as repair projects for appropriate action.

C. H. Baker
C. H. BAKER



Project: Repairs to Utilities Buildings

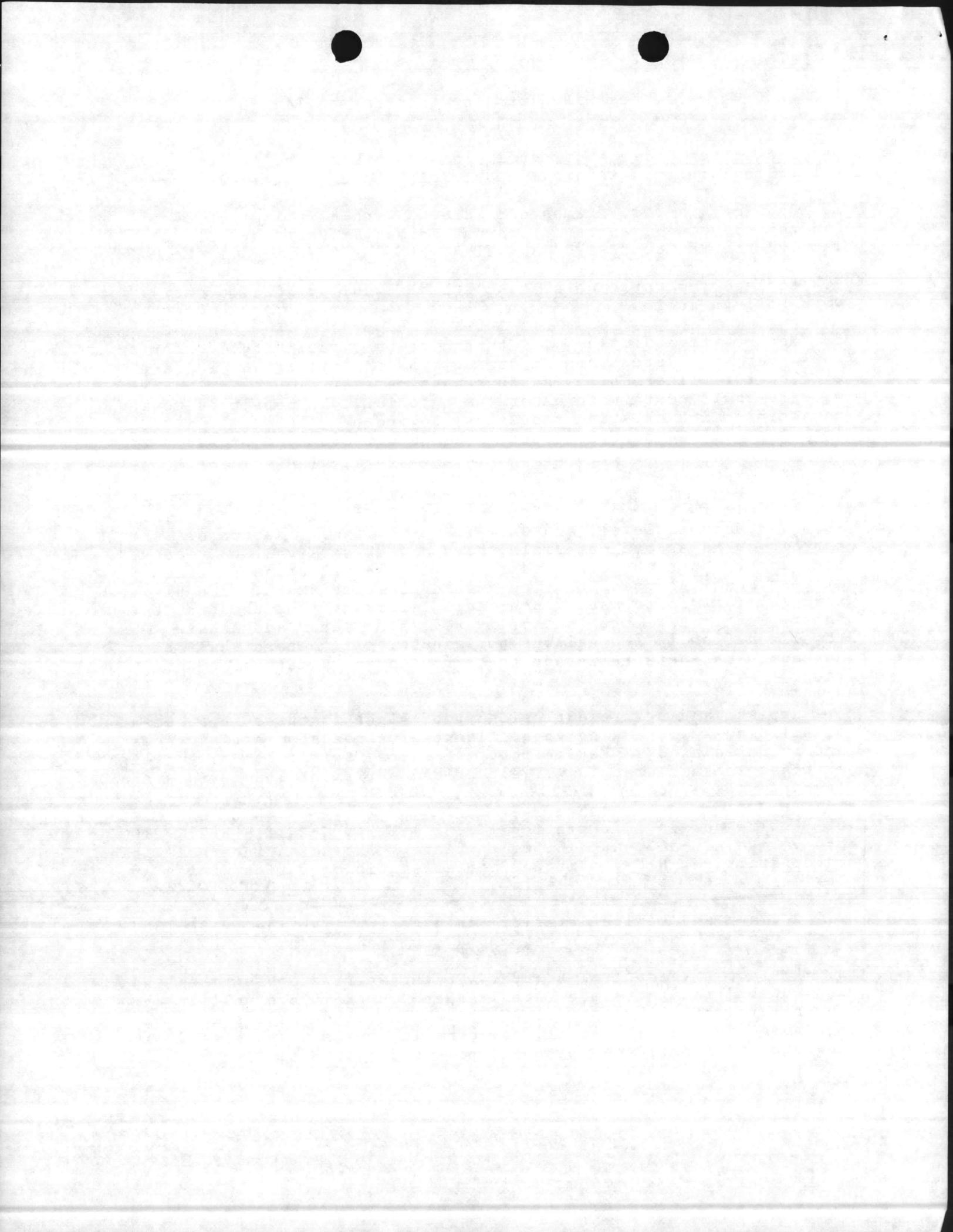
J-4

Description of Work: Work shall include but not be limited to the following items to provide a complete and usable facility: *10,000*

1. Replace windows, frames and screens with new aluminum type and replace ~~with~~ exterior doors and frames at Buildings 20, BA-138, RR-85, RR-15, BB-190, and TT-39A. *22, 32 - BLOC #20 DOORS ONLY.*
2. Replace removable metal panels behind boiler Nos. 46 and 47 with roll up doors. *RR-15*
3. Replace five Simplex flow transmitters at Building 670 for raw water, delivered water, rate of flow for filter No. 1, rate of flow for filter No. 2, and backwash rate of flow. New transmitters shall contain no hazardous materials, be connected to and compatible with existing receivers, be properly labeled, have 3-15 psi pneumatic signal output, measure differential pressure from primary devices and protected in corrosion proof housings. Existing transmitters contain mercury.
4. Replace four meters at Building BA-138 for raw water, delivered water, reservoir level, and elevated tank level. New meters shall contain no hazardous materials, have a 4-20 ma signal to receiver, and have 24-hour chart recorders. Differential pressure transmitters shall be used for flow and level measurement. The elevated tank level indicator shall use radio telemetry from the tank to water plant. Raw water and delivered water meter shall have totalized flow in 100 gallons per minute. All meters shall be housed in cabinets resistant to corrosion and water vapor infiltration.
5. Replace and rewire explosion proof light fixtures in basement of Building 22 including upper floors of three supernating rooms and in Building 32. Rewire motor starters, switch boxes, and light switches in same areas. All electrical equipment and devices shall be explosion proof. *REWIRE BUILDINGS COMPLETE AS PER N.E.C.*
6. Rewire sewage lift stations TT-32, TT-34, M-241, S-E-23, 2100, S-47, S-46, TC-563, and TC-565 completely including internal wiring, motor starters, H-O-A switches and automatic operation wiring and devices. *DELETE FROM PROJECT ITEM 6 will be accomplished in house*
7. Replace and rewire interior and exterior lighting at BA-138. Also, replace main switch box and associated conduit. *REWIRE BUILDING COMPLETE AS PER N.E.C.*
8. Replace five control starters, eight start/stop switches and two motor disconnects presently located on the flume wall in the lower level of Building 670. Work shall include relocating the equipment to the front wall, new conduit, boxes and wiring devices and equipment shall be suitable for wet conditions.

Estimated Cost:

9- INSTALL AN EXHAUST FAN AND/OR VENTILATION SYSTEM IN SUPERNATANT ROOM ND.516, BUILDING #32 TO REMOVE GASES FROM DEGESTOR TUNNEL



Project: Repairs to Steam Plants 1700, AS-3502, AS-710, and AS-705

Description of Work: Work shall include but not be limited to the following items to provide a complete and usable facility:

1700:

1. Replace deteriorated steel ash hoppers including cyclone hoppers. Replacement includes removal of approximately 4800 square feet of asbestos insulation and replacement with calcium silicate.
2. Remove asbestos insulation from approximately 200 feet of signal line on main steam header to boiler combustion control and replace with calcium silicate.
3. Remove asbestos insulation from approximately 100 feet of 3" high pressure steam trap lines from main steam header to deaerator tank and replace with calcium silicate.
4. Replace low pressure drip tank including related piping, traps, and pumps.
5. Replace stationary vacuum cleaner system including piping and auxiliaries.
6. Clean algae and other contaminants out of 420,000 gallon No. 6 oil storage tank and repair tank as necessary after complete visual and ultrasonic testing is performed.

AS-705:

1. Remove deteriorated insulation, possibly asbestos, from No. 11 boiler, sand and remove rust from boiler shell, apply heat resistant rust inhibitor paint, and reinsulate with calcium silicate protected with smooth metal jacket.
2. Replace water softeners, regulators, brine tank and piping.

Buildings AS-710 and AS-3502:

1. Replace water softeners, regulators, brine tanks and piping.

Estimated Cost: ~~\$370,000~~



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Project: Sewerage System Repairs

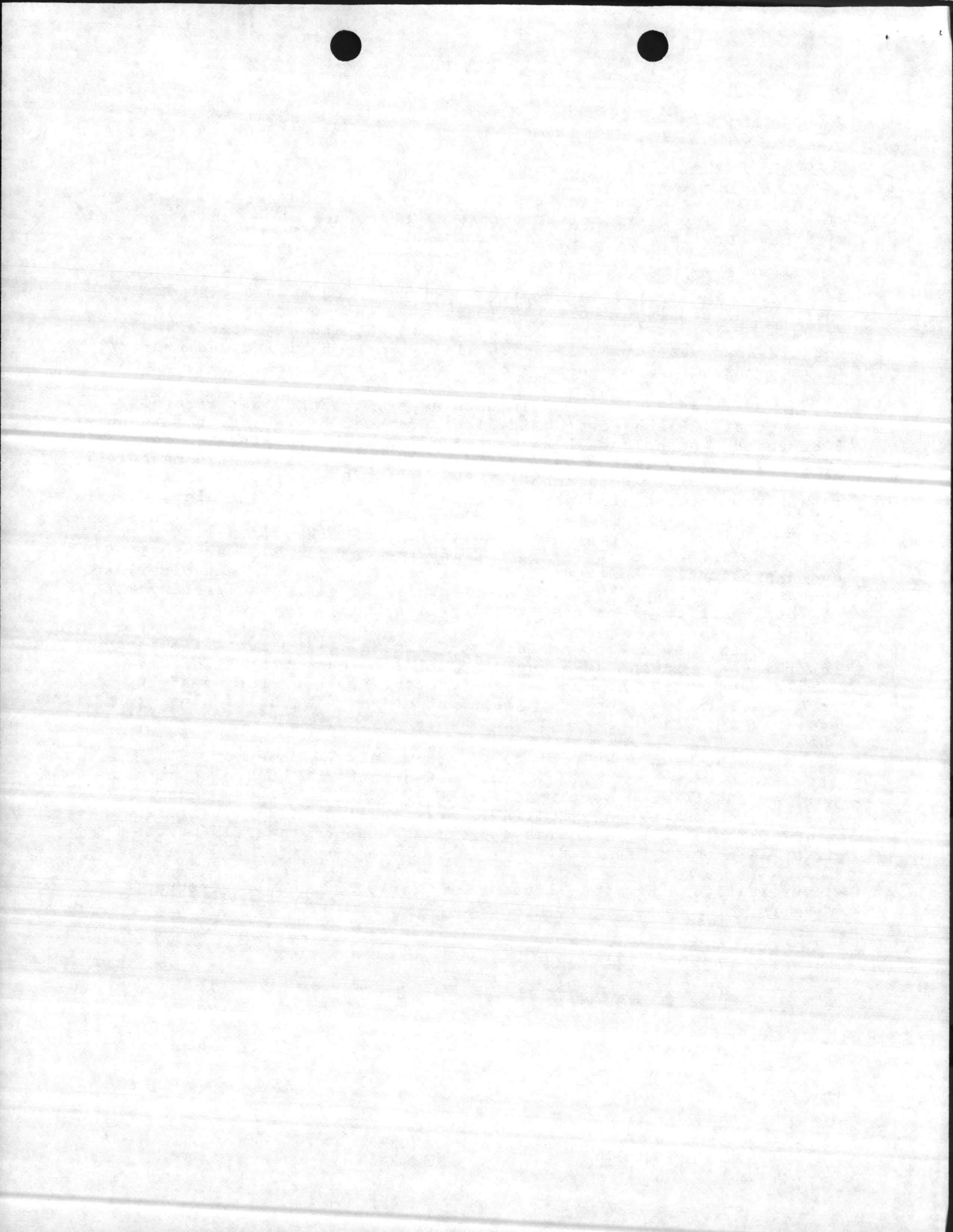
Description of Work:

- ITEM #* *HADNOT POINT*
1. At ~~Camp Geiger~~ Sewage Treatment Plant, replace two 170 foot diameter rotary filter distributors at structure ~~S-687~~ and ~~S-688~~ with new hot dipped galvanized distributors. *S-687* *S-688* *CHB*
 2. At MCAS, New River, replace approximately 650 feet of 6-inch sewer main and approximately 1,050 feet of 8-inch main with 12-inch PVC sewer pipe. Work shall begin at the sewer manhole in front of Delalio Elementary School, TC-1500, and end at the sewer manhole southeast of Building TC-1141. Work shall include repair/replacement of six manholes along the existing lines.
 3. At Brewster Boulevard Main Gate areas, replace approximately 400 feet of 12-inch sewer main along Brewster Boulevard from manhole 848L through manhole 847L to manhole 275A with PVC pipe and replace 2,000 feet of 15-inch sewer main from manhole 275A through manholes 276A, 27A, 278A, 279 to manhole 280A with PVC pipe. Work shall repair/replacement of eight manholes along the existing line.
 4. In Midway Park, replace approximately 350 feet of 8-inch sewer main from manhole 598L at MEQ LCH 1408 to manhole 978L at MEQ 1509 and approximately 150 feet of 10-inch sewer main from manhole 978L to manhole 979L at MEQ 1511. Work shall include repair/replacement of four manholes along the existing line.
 5. At MCAS, New River, replace approximately 1100 feet of 8-inch sewer main beginning at manhole A-7.6L located southeast of MEQ AS-1173 and ending at manhole A-7L southwest pump station AS-1001. Work shall include repair/replacement of seven manholes along the existing line.
 6. At MCAS, New River replace approximately 700 feet of 6-inch and 8-inch sewer main with 6-inch and 8-inch PVC beginning at manhole A-3.9L located southwest of MEQ 1257 and ending at manhole A-3.7L located west of MEQ 1269. Work shall include repair/replacement of three sewer manholes and replacement of laterals on the sewer main to be replaced.

Justification: Existing lines leak, fail, and require frequent repairs.

Estimated Cost: ~~\$218,000~~

\$ 245,467



Project: Repairs to Steam Plants BA-106 and M-230

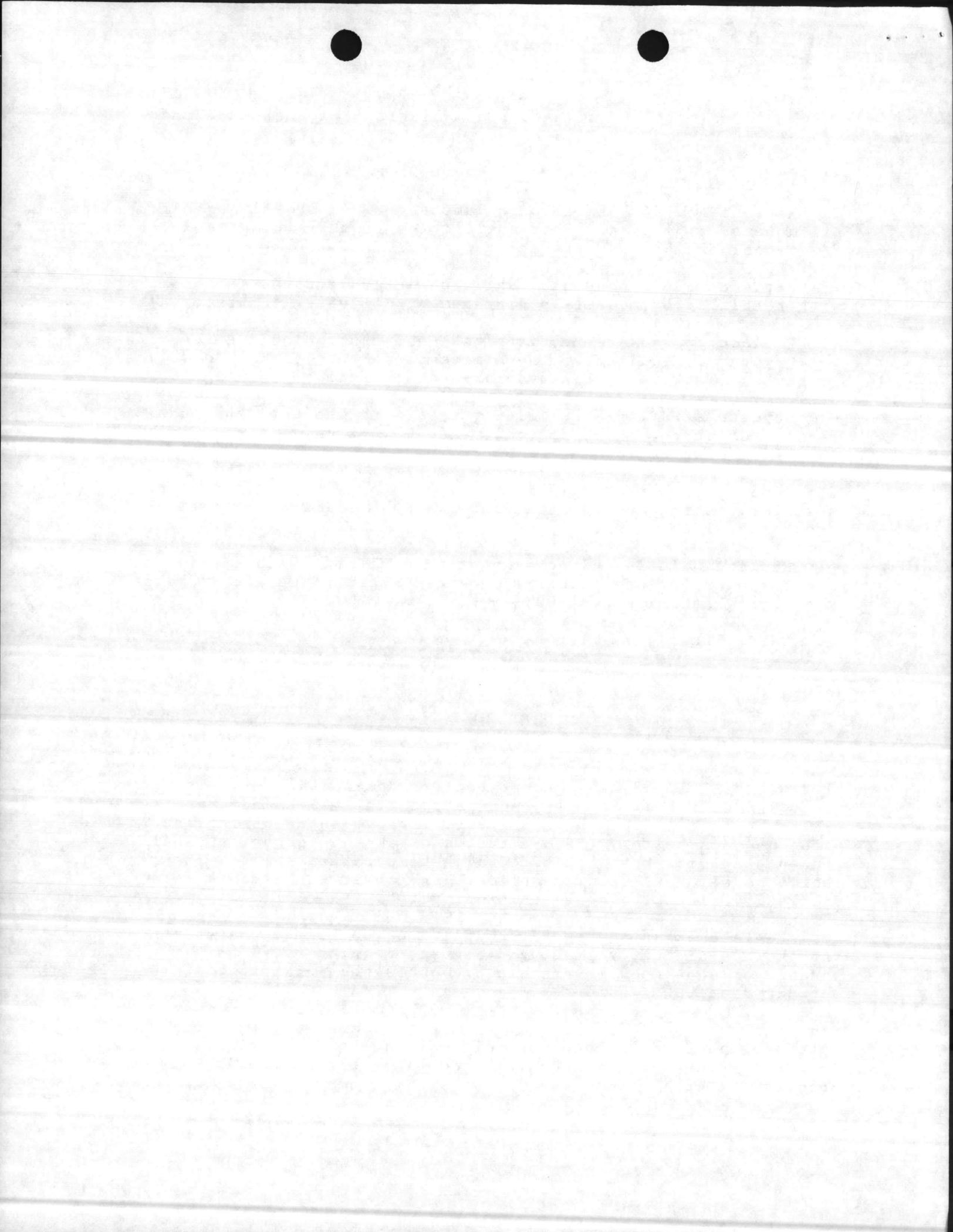
BA-106:

1. Replace No. 64 boiler to include water pumps, valves, oil pumps, oil meters, piping and other auxiliaries to make boiler completely functional for an unmanned steam plant.
2. Replace underground oil tank with an aboveground tank complete with retaining berm, off loading pumps, oil water separator, etc.
3. Replace condensate receiver/make-up tank to include steam heater coil, gauges, regulators, thermometers, valves, piping, and float controls. Tank to be lined to prevent corrosion.
4. Replace existing steam flow meters with the type that has 24-hour chart recorder, digital readout, 4-20 M.A. signal and 10 to 1 turn down ratio.
5. Remove asbestos insulation from main stem header and other auxiliary piping and replace with calcium silicate insulation with smooth metal covering.
6. Replace existing plant monitoring equipment with up-to-date minicomputer for operation of unmanned steam plant with remote monitoring at Building 1700.
7. Paint interior walls.

Estimated Cost: \$225,000

M-230:

1. Retube Nos. 38, 39, and 40 boilers to include replacing refractory and door gaskets. Replace header stop valve and nonreturn valve on each of the three boilers. Remove outer casing and insulation on each boiler. Remove rust and paint outer boiler shells and piping with rust inhibited high temperature paint. Insulate boiler shell with calcium silicate and cover with smooth metal jacket. Paint with heat resistant paint.
2. Replace existing deaerator and three boiler feedwater pumps to include piping, valves, gauges, and regulators. The new deaerator should be lowered to prevent syphoning into the steam header upon power failures.
3. Replace condensate receiver/ make-up tank, piping along with transfer pump to include controls regulators, gauges and valves. Existing transfer pump should be replaced with a duplex unit to prevent plant downtime due to the single pump failure.



4. Replace blowdown lines from each boiler to include blowdown pit and tie runoff into sanitary sewer.

5. Remove all asbestos insulation off of steam, condensate, and water lines. Reinsulate with calcium silicate with smooth metal covering.

6. Replace existing plant monitoring equipment with up-to-date minicomputer for safe operation of unmanned steam plant with remote monitoring at Building 1700.

7. Replace existing steam flow meters with the type that has 24-hour chart recorder, digital readout, 4-20 M.A. signal and 10 to 1 down ratio.

Estimated Cost: \$297,000

Total Contract Cost: \$522,000

